

Infected Total Joint Arthroplasty

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Editor

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The Algorithmic Approach



Springer

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Foreword

The authors of this book are outstanding experts on implant-associated complications. This has qualified them to write a well-structured and singularly interesting contribution on the subject.

To begin with, the history of implants is reviewed and the biomaterials used for them are described. This leads on to a special section devoted to the influence of wear particles on the local and systemic immune system emphasizing that for metal-on-metal articulations, for example, the effects on the entire body need to be considered over and above local responses like corrosion particles and lymphocyte infiltration. These are, no doubt, less dramatic with ceramic-on-ceramic articulations than with cross-link articulations. However, the ultimate effects of the cross-link particles generated are, for instance, not yet predictable.

The differential diagnosis of septic and aseptic complications and the entire battery of microbiologic tests are given extensive attention. All diagnostic approaches including histology, cytology, microbiologic sampling, and microbial spectra as well as newest state-of-the-art modalities like molecular biology tests are described and discussed at great length. Based on these diagnostic tests, the most recent insights into antibiotic medication, dosage, and adverse events are addressed. Interactions between bacteria and biomaterials and those between implant materials and peri-implant tissues in both septic and aseptic complications are also reviewed and more sophisticated diagnostic modalities like imaging techniques including isotope studies are described.

All of these subjects make the reader aware of the complexity of the problem and the potential of diagnostic studies. In a similar approach, potential treatments are described and an easily comprehensible algorithm associating diagnosis and treatment is defined. This should guarantee optimal function achieved with the most effective therapeutic modalities in terms of permanent infection control. The use of bone grafts and bone substitutes in one- or two-stage procedures for infected hip implants is also addressed.

Arranged in clearly structured sections, this book thus offers helpful guidelines for diagnosing and treating implant-associated problems. The different aspects of the problem are given equal weight so that the reader can expect a well laid out, wide-range and – more important still – user-friendly practical guide to decision-making.

Karl Zweimuller

Contents

Part I

1	Introduction	3
	Rihard Trebše	
2	Joint Replacement: Historical Overview	7
	Rihard Trebše and Anže Mihelič	
3	Biomaterials in Artificial Joint Replacements	13
	Rihard Trebše	
4	The Definition of Prosthetic Joint Infections (PJI)	23
	Rihard Trebše and Andrej Trampuž	
5	Classification of Prosthetic Joint Infections	31
	Rihard Trebše and Anže Mihelič	
6	The Epidemiology of Total Joint Arthroplasty Infections	35
	David J. Jaekel, Kevin L. Ong, Edmund C. Lau, and Steven M. Kurtz	
7	Septic Complications in Arthroplasty	55
	Gerold Labek	
8	Perioperative Antibiotic Prophylaxis in Total Joint Arthroplasty	63
	Nataša Faganeli	
9	Risk Factors for Prosthetic Joint Infections	75
	René Mihalič and Matevž Topolovec	
10	Pathogenesis of Prosthetic Joint Infections	95
	Rihard Trebše and Jurij Štalc	

11 Bacteria–Biomaterial Interactions	103
Antti Soininen, Emilia Kaivosoja, Jaime Esteban, Riina Rautemaa-Richardson, Alberto Ortiz-Pérez, Gonçalo Barretto, and Yrjö T. Kontinen	
12 Biomaterial–Host Interactions in Aseptic and Septic Conditions	119
Jukka Pajarinen, Yuya Takakubo, Zygmunt Mackiewicz, Michiaki Takagi, Eemeli Jämsen, Puyi Sheng, and Yrjö T. Kontinen	
13 Influence of Wear Particles on Local and Systemic Immune System	133
Emmanuel Gibon and Stuart B. Goodman	
14 Diagnostic Evaluations	143
Rihard Trebše	
15 Synovial Fluid Cytology	151
René Mihalič and Dunja Terčič	
16 Histological Analysis of Periprosthetic Tissue for Detecting Prosthetic Joint Infection	159
Andrej Cör	
17 Microbiological Diagnosis of Prosthetic Joint Infection	165
Jaime Esteban, Concepción Pérez-Jorge, Ramón Pérez-Tanoira, and Enrique Gómez-Barrena	
18 Microbiological Processing of Samples in the Investigation of Suspected Prosthetic Joint Infection	181
David G. Partridge and Rob Townsend	
19 Molecular Diagnosis of Prosthetic Joint Infection	193
Jaime Esteban, Diana Molina-Manso, Gema del-Prado, and Enrique Gómez-Barrena	

Part II

20 Current Treatment Strategies in Prosthetic Joint Infections	215
Rihard Trebše and Aleš Berce	
21 Total Ankle Replacement Infections	249
Michaela Maria Schneiderbauer	
22 Periprosthetic Infection Issues with Osseointegrated (OI) Implant Technology in Amputees	255
Catherine Loc-Carrillo, Alec C. Runyon, and James Peter Beck	

23	The Algorithm for Diagnostic Evaluation and Treatment	269
	Rihard Trebše and Andrej Trampuž	
24	Bone Grafts and Bone Graft Substitutes in Infected Arthroplasty	291
	Martin Clauss and Thomas Ilchmann	
	Appendix	297
	Index	313

